

C² Seal™

Glossy and Stain Resistant Lithium Sealer and Hardener for Concrete

DESCRIPTION

C² Seal™ is a patented copolymer formulation that not only seals concrete with a rich, high glossy finish but also provides the toughness of the C² Hard™ product, our advanced sealer, hardener and densifier for horizontal concrete. This easy to apply lithium silicate treatment penetrates and reacts with concrete, increasing hardness, denseness and durability on old and new surfaces. Treated surfaces resist damage from water, chemical attack and abrasion. C² Seal™ is perfect for application on standard or decorative concrete and terrazzo. It protects and enhances the color intensity of integrally colored and color stained concrete, maximizes light reflectance and eliminates the need for floor waxes, liquid polishes and conventional resin based coatings. Safer than conventional sodium or potassium silicate hardeners, C² Seal™ will not activate or contribute to surface ASR.

BENEFITS

Long Lasting Glossy Finish

A high glossy finish is obtained with 2-3 thin applications on smooth, steel troweled concrete; creates maximum light reflectance.

Improves Stain Resistance

against acids, fats, grease, and oils.

Hardens Densifies and Seals

Small reactive lithium molecules harden, densify and seals, increasing abrasion resistance.

Eliminates Waxing

Eliminates needs for floor waxes, liquid polishes and conventional resin based floor coatings.

Eliminates Dusting

In ordinary concrete, tiny particles of dust are pushed to the surface through an upward force called hydrostatic pressure, resulting in efflorescence, which leads to dusting. C² Seal™ eliminates efflorescence and prevents dusting making concrete easy to maintain.

Enhances and Protects

C² Super Hard™, C² Hard™, C² Tint™, C² Color Hard™ and C² Line™ surface applications. C² Seal™ is compatible with all C² products.

Reduces or Eliminates ASR

(Alkali Silicate Reaction) due to high lithium content. High concentrations of sodium or potassium salts, which will contribute to surface crazing and surface ASR are not present in C² Seal™.

Improves Condition of Old Floors

As concrete ages, surface stress, delaminating, curled cold joints, and other problems can arise. C² Seal™ combined with a customized grinding and polishing technique, can remove the top surface layer of the old concrete and strengthen the floor, increasing its impact and abrasion resistance.

Little or No Production “Down Time”

Cures quickly. Floor can be put into service immediately after the application process is complete. Due to the cleanliness of the process and the lack of toxic or hazardous chemicals, floors can often be serviced while the plant is in full production.

Cost-Effective

C² Seal™ improves performance, appearance and light reflectance of new and old floors.

It will reduce energy bills. A treated floor will lower maintenance costs significantly through reduction in upkeep (no waxing), and reduced tire wear.

LEEDS Certified

Tested and conforms to California Collaborative for High Performance School Indoor Air Quality standards. Use can contribute to LEED® for schools points.

Planet Safe, water-based, contains no solvents, non-toxic, no smell, complies with all known national, state and district AIM VOC regulations, non-mutagenic & carcinogenic (safe in food preparation areas), non flammable, low odor, fast drying, easy to apply.

ADVANTAGES

- Easy to apply. Fast drying
- Produces long lasting, high gloss finished concrete floor with maximum light reflectance.
- Gloss and hardness do not reduce slip resistance
- Breathable and UV stable. Will not yellow, discolor, peel or flake.
- Further improves the surface sheen, surface hardness and stain resistance of floors treated C² Super Hard™, C² Hard™, C² Tint™ and C² Color Hard™.

COMPLIANCE

Complies with all known national, state and district AIM VOC regulations. Tested and conforms to California Collaborative for High Performance School Indoor Air Quality standards.

C² Seal™

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X	California Air Resources Board SCM Districts
X	South Coast Air Quality Management District
X	Maricopa County, Arizona
X	Northeast Ozone Transport Commission
X	US Environmental Protection Agency

C² Seal™ is recommended for use on concrete classes both new and existing.

Safe for use in food and drug processing industries.

Technical Data

FORM	Milky white liquid
SPECIFIC GRAVITY	1.11
ACTIVE CONTENT	22%
TOTAL SOLIDS	22%
pH	11.0
WT/GAL	9.2 lbs
FLASH POINT	NA
FREEZE POINT	0°C (32°F)
VOC CONTENT	<100g/L
SHELF LIFE	1 year in unopened, factory sealed container

Limitations

All information provided is accurate to the best of our knowledge and is to be used strictly as a guide. Handling conditions, installation and use are not in our control therefore we cannot guarantee the results.

For indoor use only.

For additional testing information contact Crete Colors International at: support@cretecolors.com

SURFACE

PREPARATION

Please read: SAFETY INFORMATION on the label and SURFACE PREPARATION before use and application

Surface

SOLUTIONS

Remove all curing compounds and other surface contaminants using the appropriate C² surface preparation cleaner, as listed below:

C² Wash™ – Concrete laitance and construction soiling from freshly placed and cured concrete

C² Maintenance™ – General soiling and fine dust from ground/polished concrete

C² Remove™ – Curing compounds, mastics, tire marks, wax remover

C² Stain Clean™ – Oil and grease stain remover

C² Clean™ – For cleaning and degreasing light-to-heavy soiled concrete.

Protect people, vehicles, property, plants and all nearby surfaces not to be treated from contact with the product, wind drift or overspray. Use polyethylene or other proven protective material. Mask off all surrounding areas. Always prepare a test sample to ensure that the desired color and results are achieved on the specific substrate.

PLEASE NOTE:

C² recommends that a waterproof barrier should be included in the construction of the floor to prevent upward migration of moisture from beneath the concrete flat work.

The concrete surface must be free of any material that would prohibit or slow down the penetration of C² Seal™. Acid-stained concrete must be thoroughly neutralized and rinsed prior to application of C² Seal™.

Equipment

Use a low-pressure sprayer and a microfiber pad. Do not atomize.

Air and Surface Temperature

Air and surface temperature should be 4°C to 38°C (40° F to 100° F).

Specifier Note: The information provided below is intended to guide the Architect in developing specifications for products manufactured under contract for Crete Colors International, LLC and should not be viewed as a complete source of information about the product(s). The Architect should also refer to the MSDS document for additional recommendations and for safety information.

Specifier Note: Paragraph below is for PART 1 GENERAL, Quality Assurance.

Test Area

- Test a minimum 1.5m x 1.5m (5ft. x 5ft.) area on each type of masonry.
- Use Crete Colors International, LLC application instructions.

C² Seal™

Glossy and Stain Resistant Lithium Sealer and Hardener for Concrete

- Protect the test area from moisture for 72-hours following application of C² Seal™.
- Keep test panels available for comparison throughout the project.

Specifier Note: Paragraphs below are for PART 2 PRODUCTS, Manufacturers and Products.

Manufactured under contract for:

Crete Colors International, LLC,
8380 South Kyrene Rd. Suite #107
Tempe, AZ 85284, USA.
Tel: +1-480-426-0424
Fax: +1-480-499-5550
E-mail: support@cretecolors.com

Specifier Note: Paragraphs below are for PART 3 EXECUTION, Installation.

STORAGE AND HANDLING

Maintain temperature of 4-38 °C (40-100 °F), protect from extreme temperatures and keep from freezing. Do not double-stack pallets. Published shelf life assumes upright storage of factory-sealed container in a cool dry place. Do not alter or mix with other chemicals. Thaw and Mix well before using and always seal container after dispensing. Dispose of unused product and container in accordance with local regulations. Do not reuse container or remove labels. Keep this and other chemicals out of the reach of children.

PACKAGING
20L or 200L Containers

APPLICATION INSTRUCTIONS

ALWAYS TEST

each surface for suitability and desired results before application. For best results follow "Application Instructions". Let surface dry thoroughly before inspection and final approval.

Dilution

Do not dilute or alter when applying to cured concrete or cured and honed concrete. Apply mist-like coat when using on highly polished concrete (3,000 grit resin diamonds).

COVERAGE RATES

FIRST COAT
25-40 m²/L
1,000-1,500 ft²/US gallons

SECOND COAT
40-60 m²/L
2,000-2,500 ft²/US gallons

THIRD COAT
60-75 m²/L
2,500-3,000 ft²/US gallons

PLEASE NOTE: Coverage rates are offered for estimating purposes only. Variations in concrete quality, porosity, job site conditions, temperature and relative humidity will affect coverage rates and drying times.

Typical Coverage Rates*
Calculate Target Coverage Rate by testing a small section of the prepared surface using instructions found below.

1. Prepare the test section in accordance with "Preparation" information. Surfaces must be clean, dry and absorbent.
2. Add 1 liter of C² Seal™ to a clean, pump-up sprayer fitted with an adjustable spray tip. Apply a light, fine spray according to the Application Instructions below.
3. Measure the test area to establish the Target Coverage Rate per liter. Protect the test area from moisture for 72-hours following application of C² Seal™.
4. Repeat as necessary to achieve the desired level of finish.

Drying Time

30 min. to 1 hour depending on weather conditions and concrete porosity.

New Concrete

New concrete needs to be cured 28 days before application.

Existing Concrete

C² Seal™ can be applied to cure, existing concrete of any age. Any surface dust or dirt, curing or sealing compound, surface oils, coatings or paints, drywall residue, construction laitance or remains needs to be removed before application. If dirty, clean the concrete using the C² Clean™, our concrete surface cleaner and degreaser. Rinse surface thoroughly with water.

For best results, let the surface dry 24 hours before applying C² Seal™.

Application of C² Seal™ may begin as soon as prepared surface is completely dry.

C² Seal™

Glossy and Stain Resistant Lithium Sealer and Hardener for Concrete

On cured concrete, C² recommends using an automatic floor scrubber equipped with nylon-grit or cleaning pads to remove construction soiling and residues of any curing compounds. This method will further enhance the surface sheen produced by C² Super Hard™.

Please read “Safety Information” on the label and “Surface Preparation” before use and application. **ALWAYS TEST** each surface for suitability and desired results before application.

Follow application instructions. Let surface thoroughly dry before inspection and final approval.

C² Seal™ may be applied to steel troweled, grinded, polished or highly polished concrete surfaces, new and existing concrete, concrete with dry shakes, colored concrete, acid-stained concrete, stamped concrete, cementitious tiles, terrazzo, and concrete treated with sodium or potassium silicate hardeners.

For best results, surfaces should be treated with C² Super Hard™ or C² Hard™ prior to application of C² Seal™.

1. Using a low-pressure sprayer with adjustable nozzle apply a thin, even coat of C² Seal™ to dense, smooth concrete surfaces at a rate of 25-40 m²/liter (1,000 – 1,500 ft²/gallon).

2. Use microfiber pad to uniformly spreading C² Seal™ in a thin layer by pulling back the product on the surface. Make sure to pre-moisten the microfiber applicator with C² Seal™ before using. Stop spreading once product begins to dry.
3. Allow C² Seal™ to dry tack-free for about 30 minutes to 1 hour and apply additional coats to increase the gloss. Each successive coat will achieve a higher coverage rate.
4. Once dry, burnish to a high gloss finish using high-speed burnishing equipment fitted with C² Heat™ polishing pads or other approved high-speed burnishing pads. In addition to smoothing and polishing the treated surface, high speed burnishing heats the C² Seal™ to help fuse and bond with the concrete for increased durability and longevity.
5. Additional coats may be applied and burnished depending upon concrete porosity and desired finish. See application procedure for additional coats below.
6. Surface is ready for traffic within 1 hour of burnishing under typical conditions.

PLEASE NOTE:

Protect from water for 72 hours.

Application Procedure for Additional Coats:

To achieve a high gloss and stain resistant protective sheen,

application of up to three thin coats of C² Seal™ is recommended.

FIRST COAT

Using a microfiber pad, apply the first coat at 25-40 m² per liter (1,500 – 2,000 ft² per gallon). Allow the first coat to dry tack free for 20 – 60 minutes. Always burnish between C² Seal™ coats.

SECOND COAT

Using a microfiber pad, apply the second coat at 40-60 m² per liter (2,000 – 2,500 ft² per gallon). Allow the second coat to dry tack free for 20 – 60 minutes. Always burnish between C² Seal™ coats.

THIRD COAT

If additional sheen is desired, apply a third coat at a coverage rate of 60-75 m² per liter (2,500 – 3,000 ft² per gallon). Always burnish between C² Seal™ coats. Allow to dry for one hour after final coat before opening to traffic.

ALWAYS burnish between C² Seal™ coats using C² Heat™ burnishing pads.

Application to concrete surfaces previously treated with C² Super Hard™, C² Hard™, sodium and potassium silicate based liquid hardeners or dry shake hardeners will achieve a higher coverage rate.

CLEANUP

Clean tools and equipment immediately with fresh water. Immediately wash with water over sprayed glass, aluminum, or other surfaces.

C² Seal™

Glossy and Stain Resistant Lithium Sealer and Hardener for Concrete

FINAL RESULTS

The concrete surface is ready to use when dry. Maximum water resistance will develop over 7 days. Smooth and hardened concrete surfaces should exhibit reduced water absorption and the desired sheen upon drying.

PLEASE NOTE:

Do not apply C² Stain Safe™ over C² Seal™. If additional protective treatments or surface coatings are desired, please consult Crete Colors International or its local representative for recommendations.

MAINTENANCE

Use C² Maintenance™, our high quality, lithium based solution to clean and maintain the lithium treated surfaces. This proprietary product was developed to further enhance the long-term performance of the finished concrete floor.

Do not use acidic cleaners to maintain treated floors. Though C² Seal™ will improve the stain resistance of concrete; some acid concentrates and acidic foods may etch and leave a residual stain if left on the surface. Clean up all spills quickly to minimize any possible damage. All sealers, both penetrating and coatings will only slow down the staining process. Spills must be cleaned up in a timely manner.

Daily removal of surface dust and debris with a microfiber pad or dry dust mop will help maintain the desired appearance. Regular maintenance cleaning will improve surface shine. To refresh gloss, dry buff periodically with high-speed

burnisher and a C² Heat™ pad. To restore maximum shine to high traffic areas, apply mist-like coat of C² Seal™ and repeat Application Instruction steps 1–5 in affected areas.

RECOMMENDATIONS

The C² recommendations for surface preparation and product application must be followed.

Do not apply C² products on surfaces which are frozen, dirty or retain standing water.

Protect from pools or puddle water for at least 72 hours.

Thoroughly neutralize and rinse acid-stained concrete before applying C² Seal™.

For best results floors should be treated with C² Hard™ or C² Super Hard™ prior to application of C² Seal™.

For best durability and stain resistance, burnish freshly applied C² Seal™ with high speed burnisher using C² Heat™ polishing pads for high gloss finishes. Best results are achieved when burnishing heats the floor to 33°C or greater immediately after passing.

Maintain C² Seal™ treated surfaces with C² Maintenance™. This product was developed to further enhance the long-term performance of your finished concrete floor. Treated surface may be “force-dried” using heaters.

Consult Crete Colors International or its local representative regarding applications in extreme or unusual weather conditions.

PLEASE NOTE: If additional protective treatments or surface coatings are desired, please consult CreteColors International or its local representative for recommendations.

SAFETY INFORMATION

Your safety is our priority. Crete Colors International, LLC is a member of INFOTRAC'S MSDS Partnership Program. In case of any chemical emergency related to our C² products; spill, leak, fire or accident, please contact INFOTRAC free of charge for immediate first aid information.

Online access 24/7 at:

www.infotrac.net

Phone access 24/7 at:

+1 - 352- 323- 3500

C² Seal™ is a patented-proprietary water-carried solution. Use appropriate safety and job site controls during application and handling. Read the full label and MSDS for precautionary instructions before use.

FIRST AID

Ingestion:

Drink large quantities of water or milk. **DO NOT** induce vomiting. Seek medical attention immediately.

Eye Contact:

Remove contact lenses. Immediately flush eyes for 15 minutes in clear running water while holding eyelids open. Seek medical attention immediately.

C² Seal™

Glossy and Stain Resistant Lithium Sealer and Hardener for Concrete

Skin Contact:

Wash contacted area with soap and water. DO NOT attempt to neutralize with chemical agents. If irritation persists, seek medical attention.

Inhalation:

Remove affected person to fresh air. Wash mouth and nasal passages with water repeatedly. If breathing difficulties persist, seek medical attention.

WARRANTY

The information and recommendations made are based on our own research and the research of others, and are believed to be accurate. However, no guarantee of their accuracy is made because we cannot cover every possible application of our products, and anticipate every variation encountered in masonry surfaces, job conditions and methods used. The purchasers shall make their own tests to determine the suitability of such products for a particular purpose. Crete Colors International warrants this product to be free from defects. Where permitted by law, Crete Colors International makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of merchantability or fitness for particular purpose. Crete Colors liability shall be limited in all events to supplying sufficient product to re-treat the specific areas to which defective product have been applied. Acceptance and use of this product absolves Crete Colors from any other liability, from whatever source, including liability for incidental, consequential or

resultant damages whether due to breach of warranty, negligence or strict liability. This warranty may not be modified or extended by representatives of Crete Colors International, its distributors or dealers.

CUSTOMER SERVICE:

For technical assistance and product information visit our web site at www.cretecolors.com or email at support@cretecolors.com

